

REMARKS

Claims 1-18 are pending in the instant application. Claims 1-7 are rejected. Claims 8-16 are withdrawn. Applicant has amended claims 1-2. Claims 17 and 18 have been added.

The specification has been amended to add an Abstract, correct the notation of an internet address, and provide a corrected sequence listing.

Claim 1 has been amended to recite An isolated DNA comprising an open reading frame encoding a protein characterized by an amino acid sequence comprising a component sequence of at least 150 amino acid residues having more than 55% identity with an aligned component sequence of SEQ ID NO:3, wherein said protein is a component of transcriptional gene silencing system. Support is in the specification on page 6, lines 4-5 and page 15, lines 18-20.

Claim 2 has been amended to recite where R2 is more than 55% identical to an aligned component of SEQ ID NO: 3. Support is in the specification on page 6, lines 4-5.

Claim 17 has been added to recite an RNA complementary to an mRNA transcribed from the DNA of claim 7. Support is in the specification on page 15, lines 16-20.

Claim 18 has been added to recite a method of releasing silencing in a plant comprising the step of expressing in the plant the RNA according to claim 17. Support is in the specification on page 15, lines 16-20.

No new matter has been added by these amendments.

Objections to Specification

The application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. § 1.821 (a)(1) and (a)(2). However, the Examiner noted that the application fails to comply with the requirements of 37 C.F.R. § 1.821 through 1.825. In response, Applicants submit herewith 1) a copy of the corrected sequence listing in both computer readable form (CRF) and paper copy; 2) an amendment directing its entry into the specification, and 3) a statement that the content of the paper and CRF copies are the same and, where applicable, include no new matter.

The Corrected Sequence Listing contains SEQ ID NOs 1-34 that are also identified in the description. No new matter is contained in the Corrected Sequence Listing.

STATEMENT OF VERIFICATION

Applicant hereby provides a Computer Readable Form of the Corrected Sequence Listing as well as the Paper Copy thereof. The undersigned states that the Paper Copy and the Computer Readable Form, submitted in accordance with 37 CFR §1.821(c) and (e), respectively, are the same.

The Examiner noted that the application does not contain an abstract of the disclosure as required by 37 C.F.R. § 1.72(b). Applicants submit herewith an abstract on a separate sheet.

The specification was objected to for inappropriate notation of an internet address. Applicant has amended the internet address on page 5, line 3 into an acceptable format.

The Office Action questions the appearance of SEQ ID NOS 26-33 in the sequence listing and its corresponding discussion in the description. In response, Applicants respectfully point out to the Examiner that SEQ ID NOS 26-33 are discussed on page 14, in the second paragraph. SEQ ID NOS 26-33 are partial sequences obtained from clone 1 and 2 of the at least two homologous MOM genes from *Brassica oleracea*.

Applicants contend these amendments, corrected sequence listing, and comments overcome these objections and request these objections be withdrawn.

Claim Rejection under 35 U.S.C. § 112, second paragraph

Claim 7 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner stated that the phrase “expression of corresponding anti-sense RNA in a cell” is confusing and requests clarification.

Applicants respectfully disagree with this rejection. The MOM gene functions as a trans-acting modifier locus (silencing locus), *i.e.*, the presence of functional MOM gene results in silencing. As explained in the specification, on page 1, line 30-32, a mutation at such a locus resulting in a mutated protein causes reduced gene silencing and reactivation of the previously silent locus, *i.e.*, silencing is released and stable expression is restored. Example 7 shows how this theory may be applied to transgene expression. Where expression

of a transgene has been silenced upon introduction into a plant, release of that silencing can be achieved by reducing or knocking out expression of the MOM protein through antisense technology. Accordingly, it is very clear how expression of an antisense sequence for MOM silencing genes from Arabidopsis (and other sources) can be used in the regulation of gene silencing.

Further, in order to more particularly point out and distinctly claim the instant invention, claims 17 and 18 have been added to recite an RNA complementary to a mRNA from the DNA of claim 7 and a method of releasing the silencing in a plant by expressing the RNA.

The above comments and amendments overcome this rejection, and Applicants respectfully request its withdrawal.

Claim Rejection under 35 U.S.C. § 112, first paragraph

Claims 1-4 and 7 were rejected under 35 U.S.C. § 112, first paragraph, written description as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants respectfully disagree. However, in order to more particularly point out and distinctly claim the invention, Applicants have amended claim 1 to recite the functional feature of the protein. Further, the amendment includes the subject matter that Examiner admits as being fully described in the specification and therefore the objection is overcome.

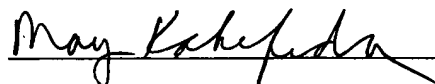
Claims 1-4 and 7 were rejected under 35 U.S.C. § 112, first paragraph, scope of enablement, because, the Office Action contends "the specification, while being enabling for any DNA encoding SEQ ID NO: 3, does not reasonably provide enablement for DNA encoding a protein structurally related to SEQ ID NO: 3 having any function."

Applicants respectfully disagree. The subject matter defined by the newly amended claims is fully enabled. The skilled person in the art is shown in Example 6 how one can obtain further DNA sequences falling within the scope of the amended claim, and Example 7 clearly demonstrates how these can be tested and utilized. The present claims are thus fully enabled by the specification as filed.

Conclusion

In view of the above amendments and remarks, it is submitted that the application is now ready for allowance. If any additional information is needed, the Examiner is invited to call the undersigned attorney at (919) 765-5071.

Respectfully submitted,



Mary Kakefuda
Attorney for Applicants
Registration No. 39,245
Telephone: 919-765-5071

Syngenta Biotechnology Inc.
P. O. Box 12257
Research Triangle Park, NC 27709-2257

Date: July ^{mlc} 29, 2004